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1. General:

The structure of the Rumanian railway system was shaped by historical, political and geographical factors. These factors account for the diversities in the density, performance and layout of the lines of this railway net which constitute the inherant strength and weakness of the system.

a. The historical development of the Rumanian state is reflected in the growth of its railway system. The original Principality of Rumania (Old Rumania) with its constituent provinces of Moldavia (the area between the Carpathians and the Pruth River), and Wallachia (between the Carpathians and the Danube River) in 1878 incorporated the hitherto Turkish Dobruja, the delta area of the Danube River. After World War I, in 1918, Bessarabia, the area between the Pruth and the Dniester Rivers, was acquired from Russia and Transylvania (Siebenbuergen), the Bukovina (the headwaters region of the Sireth River) and the eastern part of the Tisza River plain were acquired from Austria-Hungary.

During World War II, parts of Transylvania and Dobruja were temporarily lost to Hungary and Bulgaria after the settlement arbitrated in Vienna. These territories were restored to Rumania after the war but Bessarabia and Northern Bukovina (the area around Chernovitsi) had to be ceded to the Soviet Union. The railway systems in these various provinces had developed along different lines, a development caused by their previous attachment to different states. The former Austrian-Hungarian districts possessed a network of railroad lines relatively dense and efficient. Moldavia and Wallachia on the other hand were equipped with a rather sparse railroad net in spite of favorable terrain conditions, and Bessarabia and Dobruja were very poor in railroad lines. In spite of an

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extensive construction program these historical marks in the structure of the Rumanian railway system have not yet been entirely eliminated.

b. The geographical features of the country had a similar effect on the general structure of the railway system and the determination of the courses of railroad lines. From a topographical point of view, there are the following distinct regions: The western plain (area of Timisoara, Transylvania in the Carpathians, the plains and hills to the east (Moldavia and Dobruja) and south (Wallachia).

(1) The west shows a very dense and efficient net radiating from Timisoara. Its basic weakness is the lack of interconnections.

(2) The Transylvanian railroad net was adversely affected by the mountainous character of the country which, in parts, shows alpine features. All major railroad lines must follow valleys and passes and consequently have to make long detours and meet difficulties because of the many artificial structures required. All these facts have a detrimental effect on the carrying capacity of these lines.

(3) Wallachia is crossed by one East-West trunk line starting at the port of Constanta and running to Timisoara via Bucharest-Craiova. After World War II this line was supplemented by the construction of the important Craiova-Bucharest-Faurei section. Besides various local feeder lines serving purely economical interests, the railroad lines to Transylvania leading across the passes of the Transylvanian Alps branch off to the north from this trunk line. The most important crossing is the Predeal Pass (1040 m), south of Brasov, used by the long-distance line from Bucharest-Ploesti (oil district) - Brasov - Cluj (Klausenburg) - Oradea - Budapest. This line is double-track in some sections. In the south are feeder lines to the Danube ports.

In the Moldavian plain the line leading from Bucharest via Buzau-Foesani - Bacau to Galicia, now Soviet territory, is the main traffic line. This line is also partly double-track.

From it two connections branch off to the west across the Carpathians to Transylvania. These two lines have many bridges and are of a limited capacity. From the east it is joined by the railroad lines coming from Bessarabia, now Soviet territory, and the ports of Constanta, Braila, and Galati.

Bessarabia with the important double-track Odessa-Globodka-Shmerinka-Lemberg or Kiew line had to be ceded to the Soviet Union after World War II.

2. Organization and personnel:

a. As in almost all the other countries of Europe, the Rumanian railways are state-owned. By decree of 4 March 1949, the previously autonomous Directorate General of the State Railways

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(Directiunea Generala CFR) was divested of its independence and incorporated as a Railway Department (Departamentul CFR) into a reorganized Ministry of Traffic [redacted] 50X1-HUM

This Ministry exercises central technical and administrative control and is in charge of organization and planning of the entire transport and traffic system of the country. It also represents the interests of the state in all traffic and transportation agencies in which the state has had a share after the nationalization achieved in 1948.

In this organization the Railroad Department is charged with the administration, operations and construction of railway lines. Article 1 of the newly decreed law makes the hauling of goods and luggage to and from the railroad station a responsibility of the State Railways. To all intents and purposes this established a state monopoly for the entire cartage, although this monopoly has not been enforced so far. [redacted] 50X1-HUM

The principle of self-government for all the major administrative agencies (Regional and Central Directorates, etc.) was decreed by the Railroad Department as the expression of a "revolutionary form of socialist management" in July 1949. According to this decree, these administrative agencies are henceforth to draw up their work and production plans themselves in order to show their initiative in exhausting all the means available to them. They have to take, independently, all the appropriate steps for the fulfilment of the production plans. The chief of the district concerned will bear the full responsibility for all these measures. This "commercial decentralization" probably has its real cause in a general tendency toward profit. How far this "self-administration" extends to lower levels and to what fields it will be restricted cannot yet be identified. The practical result of this principle remains to be seen.

b. Personnel of the State Railways:

Reliable reports have not been received on this phase. The railway personnel is generally well paid. The shortage of technical personnel seems to be acute since, according to advertisements in the daily press, up to 1,900 railroad engineers are wanted. The CFR technical schools run 200 classes in which, in 1948, approximately 8,000 students were being trained. The Institute for Transport and Traffic, in its set-up similar to a polytechnic institute, is composed of five semesters and has charge of training experts in all fields controlled by the Ministry of Traffic. The Institute for Transport and Traffic was founded in late 1948. It started operating on 30 November 1948 and 250 students, graduates from high school, were admitted after passing a special entrance examination. Apart from this furtherance of the prospective technical railway personnel, vacancies are still filled with a greater regard to party affiliations than efficiency. Thus for instance the deputy CFR Minister, Augustin Alexa [redacted] who, as late as 1947, worked in the Cluj railroad shop. After the March 1948 elections he was appointed Director General of the State Railways. It is clear that he lacks the necessary qualifications for this post. 50X1-HUM

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c. Very strict regulations were passed in July 1949 by the Ministry of Traffic to guarantee the safety of traffic and railroad installations. The establishment of special prosecuting authorities and railroad tribunals (Tribunalele speciale feroviare), to be set up at the seats of the various Regional Directorates in accordance with a decree promulgated shortly afterward, points up the tendency of establishing a strict disciplinary procedure in the railway system. The law took effect on 15 September 1949.

A uniformed and armed railway police organization is available for the execution and control of the decreed measures. This organization is in charge of train escort duties and the security of railroad stations and bridges. The strength of this organization is not known.

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3. Railroad Net

a. Taking into account the territorial changes after the end of World War II the trackage of the Rumanian State Railways may be assumed at about 10,000 km. Reliable official figures are, however, not available. The railroad lines are standard gauge and mostly single-track. Only 600 km,(6 percent)are double-track. There are also about 1,100 km of narrow-gauge lines, which are of local importance.

Railroad lines for which sufficient data are available will be dealt with in detail in special reports later on. The railroad lines which were converted to Soviet gauge during the war (after 1944), were reconverted to standard gauge up to 1946. The Soviet gauge railroad system generally terminates at the present Soviet-Rumanian border. The existing transfer points are dealt with in a special following chapter (para 3f(5)).

b. In carrying capacity only the major through-lines can compare with Western European standards. All the other railroad lines, due to difficulties caused by mountainous terrain or a weak subgrade, are of only limited performance. Often they are capable of half-trains only. By overcoming constructional deficiencies and by the application of numerous technical improvements, the Rumanian State Railways (CFR) try to raise the efficiency of their railway system. A beginning was made in the Fall of 1948 with the installation of fully automatic safety and signal devices on the important double-track Bucharest-Ploesti line (oil shipments). The improvement of other trunk lines is scheduled. The pneumatic brake has been in use since the Fall of 1948, a measure through which the average speed of trains could be raised from 24.8 to 28.2 km ph.

c. The exchange on main railroad lines of the previously predominantly used short rails of 12 to 15 m for long rails of 30 m and more will probably lead to a further increase of speed and result in a greater traffic and improved performance. The rail material required for this improvement program is chiefly delivered by the Soviet Union and Czechoslovakia in the framework of the concluded trade agreements. As compared with 1947 figures, the average speed of trains could be increased as follows:

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Trains consisting of high-speed rail coaches: by 11 percent
Fast trains: by 12 percent
Passenger trains: by 11 percent
Freight trains: by 14 percent.

d. Bridges and tunnels:
The mountainous character of the country required a large number of bridges and tunnels. Many of them, particularly in the western part of the country, were destroyed during the engagements in 1944. On the main lines, the destroyed structures have been repaired or reconstructed, although frequently only in a makeshift manner; on the secondary lines the reconstruction is still going on.

(1) The bridges are characterized not so much by great length as by their altitude and their difficult constructions, particularly in Transylvania. The longest structure is the railroad crossing at the wide lower Danube River and the adjacent swampy plains between Fetesti and Cernavoda on the Bucharest-Constanta line. This crossing consists of several bridges in a total length of several kilometers, the Danube River bridge itself being 800 meters long [redacted] This crossing is the only direct railroad connection with Bulgaria. 50X1-HUM 50X1-HUM

[redacted] There may have been some changes in the type of construction (material used, number of supports, spans etc.) of those bridges which were destroyed during the war to be reconstructed only in a makeshift way. But also in these cases experience shows that the permanent reconstruction of these structures will mostly restore the former type of construction. 50X1-HUM [redacted]

(2) [redacted] As to these tunnels the same applies that has been said with references to bridges. Construction work has been under way on two tunnels of the important Bucharest-Brasov line between Predeal and Timisul since the Fall of 1948. These tunnels, 70-year-old structures, each about 1,000 meters long, are to be widened to allow a better flow of traffic.

e. Electrification:

Rumania has only one electrified narrow-gauge railroad line east of Arad although the water power available in the mouhtainous regions of the country would offer favorable conditions for electrification. The electrification of the Ploesti-Brasov main railroad line with a subsequent extension in both directions

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as suggested by the Germans during the war has not been carried out. It may be assumed, however, that the Rumanian State Railway will start on a large-scale electrification program as soon as the gaps in the network of the Rumanian railroad system have been closed.

f. Border Stations:

(1) There are numerous border crossings along the Hungarian frontier since the railroad net in western Rumania, favored by the flat territory of this district is rather dense.

(2) Transit traffic to Czechoslovakia starts from Rumanian Halmeu on line to Cop and the Czech border station of Cierna. This line, although leading through Soviet territory, is still standard-gauge.

(3) Connections with Yugoslavia are only maintained by several lines north of the Danube River originating in the area of Timisoara. Due to the political tensions between the two states these border points were closed in early 1948.

(4) With Bulgaria which is separated from Rumania by the Danube River, there are only two connections, one of which is maintained by a railway ferry.

(aa) The railway ferrying operations between Giurgiu and Ruse conducted by means of the Sofia ferry are wearisome. The boat has a capacity of 12 railroad cars and takes 1 hour for a full trip, (including loading operations). This results in an average handling of 4 or 5 trains in 24 hours, a performance which was reached during the German occupation. In the event of Soviet war operations in the Balkans this crossing would constitute a considerable bottleneck for the increased traffic volume to be expected in such an emergency. 50X1-HUM

(bb) The second direct railway crossing is in the vicinity of the Black Sea coast. Dobric is the Bulgarian customs station on this line and is operated by the Bulgars as far as Kardam in Rumania. This line is single-track and therefore of limited performance. On Rumanian territory, between Fetesti and Chernavoda, it has to overcome the wide and marshy Danube River by a bridge system several kilometers long.

(cc) The railway ferrying operations, started by the German occupation near Calafat (Rumania) and Vidin (Bulgaria) with a daily handling of four or five trains, have apparently been suspended. The reasons for this are unknown; possibly the ferry was sunk during the war.

(dd) The inadequate railroad connections across the Danube River make the construction of a railroad bridge imperative, especially for the Soviets. So far only plans have been made and solemn promises exchanged between the partners concerned apart from test borings made at possible bridge sites. As during the German occupation, the Rumanians are chiefly responsible for this delaying tactic since they fear that such a railway bridge will have a detrimental effect on the Rumanian port of Constanta and will

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Possible bridge sites are near:

Calafat - Vidin
Corabia - Giurgen
Turnu - Magurele - Somovit or Nikopol
Zimnicea - Svistov
Giurgiu - Ruse.

The latter offers the most favorable conditions with regard to terrain features and railroad operations.

(5) The crossings into the Soviet Union require a change of gauge and transloading operations. Some of the transfer points used during the war or shortly after it seem to have been closed due to an insufficient volume of traffic normally handled at these stations. According to available information, the following transfer points are still operating:

(aa) Galati: The terminal of the Soviet-gauge line arriving from Reni across the single-track Pruth River bridge reconstructed in a makeshift way. The auxiliary railroad stations of Galatz-Larga and Galatz-Brates have been improved as transloading points from Soviet gauge to standard gauge. They are said to have 20 tracks (?) each. The transloading is done mechanically and manually by Soviet workers. A stretch of 2 km has been declared off limits to the Rumanian population and is guarded by Soviet soldiers.

Reliable data on trackage, ramps, and transloading capacity are not available. 50X1-HUM

(bb) Jassy-Socola: There is a single-track Soviet-gauge railroad line from Unghoni to Jassy-Socola. It crosses several bridges, including the 140 m long bridge across the Pruth River [redacted] As late as 1947 the transloading was done by hand without any mechanical devices. It is not known whether the transloading has now been modernized. 50X1-HUM

(cc) Szigetkamara: This station was last confirmed as a transloading point in 1946 but it no longer seems to be used as such. The terminal of the Soviet-gauge system has possibly been shifted to the north to a line coming from Stanislau-Woronienka. Information of the Summer of 1949 confirmed that the Szigetkamara-Cop line, although running through Carpatho-Ukraine, continues as a standard-gauge line and will remain available to the Rumanians for their transit traffic to Czechoslovakia (see para f(2) above) until conversion of this line to Soviet gauge. A target date for this conversion has not been fixed *.

No reports concerning transloading facilities or operations have been received for Pruth (100 km north of Galati) and Dornesti (50 km south of Czernowitz), the two remaining potnetial crossings into the Soviet Union. It may be assumed with a fair degree of certainty that these two border stations are no longer being used as transfer points, since the existing transfer points are adequate to handle the restricted economic and industrial traffic maintained between the two countries.

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4. Post-War Construction Projects:

a. The economic plan laid down by the CFR for 1949 and the following years is dominated by two principles, according to which priority is given to:

(1) Projects which will improve railroad operations and reduce operating costs

(2) Capital investments which will have a speedy and productive effect.

b. The following points of view were decisive in designing the individual projects:

(1) Construction work on existing railroad lines (elimination of war damages, improvement of the subgrade and of the superstructure, increase of the carrying capacity, installation of automatic safety and signal equipment); Completion of new railroad lines now under construction; Construction of new lines for the economic opening of the country or for the relief of existing lines;

(2) Improvement of the rolling stock and the available locomotives through repairs and new constructions

(3) Mechanization of operations at railroad stations and in railroad shops with a view to increase efficiency and profitability

(4) Expansion of railroad installations at railroad junctions in order to eliminate bottlenecks.

c. In detail, the following post-war projects are completed or still under way:

(1) Craiova-Rostore-Videle-Bucherest-Faurei line (length:300 km): newly constructed as a standard-gauge line, completed in September 1948. This project was scheduled before the war but made slow progress due to the lack of required rail material. The line was built single-track for the present although it was planned as a double-track line. It is a valuable supplement to the net of railroad lines available in Wallachia and established a short east-west connection which was missing in this area. It is of an equal economic and military importance.

(2) Bumbesti-Livazeni line section (length: 33 km).

completed in October 1948 after a construction time of almost 25 years. It closes the previous gap in the single-track standard-gauge Piliasi-Simeria-Teius-Cluj line and creates a new north-south connection in Southern Rumania. At the same time it represents a valuable connection between the Jiu coal basin and the important industrial centers of the country. Since it is a difficult mountainous line with many tunnels and bridges its carrying capacity is considerably limited.

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In connection with the new construction the rail and locomotive servicing facilities of the Carbunesti railroad station on this line are being improved to make them adequate for the increased requirements of a through-line. The laying of the track was half completed by late 1948, the remaining work scheduled to be completed by the end of 1949. The engine houses will not be up to the required strength before 1950.

(3) Cluj-Apahida-Sarmas line (length: 55 km):

A single-track standard-gauge line still under construction. The excavation work was completed in late 1948. This line will serve for opening the agrarian districts and will establish an interconnection between two existing north-south lines.

(4) Salva-Telciu-Moisei Line (length: 60 km):

This line is completed as far as Telciu, the remainder is still under construction; presumable completion of work in late 1949. A very difficult single-track standard-gauge line with many man-made structures with passes of up to 950 meters. It will open the timber and ore resources of the Maramures province. At the same time it is a valuable interconnection between two east-west lines in this district. Its real value will not become discernible until the Szigetkamara-Cop line, which leads through Soviet territory, is converted to Soviet-gauge and closed to Rumania. Due to the requisition without compensation of the land required for the construction of this line, the peasants effected by this measure committed numerous acts of sabotage, thus slowing down the progress of this project.

(5) Ploesti-Targoviste Line (length: 40 km):

The line was built single-track after the war and put into operation. It represents a valuable cross connection and relief line in the oil district.

(6) Moreni-Baicoi Line (length: 20 km):

In the Moreni-Provita section, this narrow-gauge line was converted to a standard-gauge line; moreover a connection was established from there to Vornicul Margineanu on the Ploesti-Targoviste line. The line, which considerably facilitates oil shipments from the Moreni oil center, was completed in late 1947.

(7) Bucharest-Snagov Line (length) 26 km):

A single-track standard-gauge line completed in May 1948. It has two viaducts and six small concrete bridges in addition to numerous sidings. It connects agrarian districts, important for the supply of Bucharest, to the railway net. After extension of this line to the west as Arges Peris a connection would be established with the Ploesti-Bucharest line thus offering a rerouting possibility which would ease the present traffic burden on the oil line.

(8) Arad-Oradea (Grosswardein) Line (length: 120 km):

This line has allegedly been under construction as a double-track line since 1948. This information, however, requires confirmation.

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since it seems improbable. The line has always been a single-track line and plans for the construction of a second track have not been known. There does not seem to be an urgent need for such a project. The line, it is true, interconnects two important east-west lines but this connection is not required as a double-track line as it runs just along the Hungarian border.

(9) Tecuci-Faurei Line (length: 100 km):

The Tecuci-Faurei line is a recently constructed single-track line establishing a direct connection between the two railroad junctions and thus shortening the previous route to Constanta on the Black Sea. The detour via Galati has been eliminated. This new line is also an extension of the important new Craiova-Bucharest-Faurei line (see para 4b (4) (1). After completion of the 400-meter bridge over the Sereth River near Buraia, the line was opened on 16 October 1949. The thus established shorter connection between Moldavia and Wallachia is of the greatest importance to Soviet transit shipments.

(10) Deda-Saratel Line (length: 50 km):

This single-track standard-gauge line was hastily constructed by the Hungarians during the war (the district was ceded to Hungary from 1940 to 1945). The line, which was badly laid out, is now being given a new subgrade to eliminate the constant slips in the embankment. The entire line is of major economic and military importance as an east-west connection through Transylvania.

(11) Trackage in the Port of Constanta:

The trackage amounting to about 4.7 km, in this port was expanded and partly replaced.

(12) The following railroad junctions were improved:

Craiova: Doubling of the shunting sidings to 16. Expansion of the engine houses, improvement of the technical installations (construction of coal bins, turntables etc.). This work has been under way since 1948.

Brasov: A section of a new shunting station with the most modern equipment of the country was completed in November 1948.

Ploesti: The station including its auxiliary stations is being expanded.

A large number of other small railroad stations in all parts of the country is being improved to make them adequate for the increasing volume of traffic.

d. The following construction projects, planned for a long time have not been started:

(1) The construction of a second track between Copsa Mica-Teius on the Brasov-Podul Olt-Sibiu-Cluj Line.

(2) Construction of a short connection between Valea Homorod and Vad on the Brasov-Podul Olt Line.

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(3) Construction of a new connection between Pintia-Brad (130 km north of Timisoara).

(4) Conversion to standard-gauge of the Odobesti-Jurca narrow-gauge line. (Northwest of Focsani).

(5) Construction of a second track on the Adjud-Bacau-Pascani-Dornesti- (Czernowitz) line. The cession of the Czernowitz district to the Soviet Union will probably make this project superfluous.

5. Locomotives and Rolling Stock:

a. [redacted] there was the following picture in 1938: 50X1-HUM

Locomotives:	2,067
Coaches:	3,127
Open freight cars:	26,571
Boxcars:	20,092
Tank cars:	9,632

The rolling stock suffered comparatively little war damage. 50X1-HUM
[redacted] it may be assumed that the prewar level has in the mean time been reached if not surpassed. The nationalization of 10 private railroad companies in 1948 brought about a considerable increase in rolling stock for the state railways, particularly in the field of tank cars. The relatively high percentage of tank cars is due to the leading position of the country in the production of oil.

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[redacted] the available rolling stock and locomotives are adequate for the present situation and even increased requirements.

b. For the maintenance of the rolling stock and for new construction, the State Railways are equipped with a large number of partly very efficient and modernly equipped railroad shops. The most important of them are:

Bucharest-Grivita (locomotive and car factory, more than 2,000 workers)
Turnu Severin
Ploesti
Arad (6,000 workers
Simeria
Timisoara
Pascani
Brasov (repair shop for railroad motor cars)
Cluj
Targoviste (repair shop for railroad cars)
Galati
Constanta
Jassy
Craiova (extensive rebuilding of factories in 1948, scheduled work force 5,000 to 7,000 men)

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Oradea (railroad car repair shop)
Sibiu (repair shop for railroad cars)
Dej (repair shop for railroad cars)
Satu Mare (repair shop for railroad cars)

After Soviet pattern, the railroad shops are in competition with one another as to the highest output. That the quality of the performed work decreases in proportion to the augmented output is experienced in Rumania just as in all the other countries where this system has been adopted.

c. Railroad equipment is also manufactured or repaired in the nationalized enterprises, of which the following are known:

(1) Uzinele 23 August, formerly Malaxa Plant in Bucharest.

Monthly output: four or five locomotives and 50 freight cars, chiefly for the Soviet Union, in addition to six to eight Diesel motor rail cars. Work force: Almost 5,000 men.

(2) The Dux Railroad Car Factory in Bucharest is the first plant to manufacture electric narrow-gauge locomotives in Rumania.

(3) Vulkan Plant in Bucharest. Manufacture of locomotive boilers; deliveries to the Soviet Union.

(4) Red Star Plant (Uzinele Steana Rosi), formerly E.Wolff Machine Factory, in Bucharest. It chiefly manufactures locomotive boilers.

(5) Red Flag Plant (Uzinele Steagul Rosi), formerly Astra Railroad Car Factory in Brasov. Work Force: 5,000 men. Manufacture of railroad tank cars and freight cars, engines for railroad motor cars, extensive deliveries to the Soviet Union.

(6) Locomotive and Freight Car Factory, formerly Fabrica de Locomotive Franco-Romana, in Braila (?). Under Soviet control, about 2,000 employees, repair of heavily damaged locomotives for Rumania and the Soviet Union, monthly output: 12 to 15.

(7) Red Banner Plant (Uzinele Flamura Rosie) in Arad. Work force: 2,800. Monthly output: 40 freight cars and 30 tank cars, chiefly for the Soviet Union.

(8) Ironworks in Resita (Uzinele de Fier din Resita). Manufacture of locomotives.

(9) Union Plant in Satu Mare. Railroad car and machine factory. Production of new railroad cars.

(10) Jor Plant (Industria Optica Romana) in Bucharest. Production of locomotive accessories and precision parts.

d. Most of the required raw materials and spare parts are delivered by the Soviet Union and Czechoslovakia. The country seems to be adequately supplied. Besides raw materials

countries in exchange for oil deliveries.

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6. Traffic Performance:

Only press reports which cannot be taken at their face value due to their propagandistic tendencies, are available on this aspect. Management along business lines, increased efficiency and a lowering of operating costs resulting from it are the main tendencies pursued by the State Railways. The previously very high railroad tariffs could be lowered as follows:

Freight tariffs by 20 percent on 1 May 1948
Passenger tariffs by 5 percent on 1 May 1948 and again by 15 percent on 1 September 1948.

The increase in the average daily performance of locomotives is shown by the following figures:

(Kilometers run by one passenger train locomotive):

1938:	95 kilometers per day
1948 (April):	165 kilometers per day
1948 (May):	167 kilometers per day

(Kilometers run by one freight train locomotive):

1938:	95 kilometers per day
1948 (April):	140 kilometers per day
1948 (May):	149 kilometers per day

These figures reveal an apparently good condition of the locomotive park and a satisfactory working of the maintenance system.

b. The 1948 volume of the freight traffic has risen by 14 percent as compared with 1947, the average journey performed by one locomotive being shorter by 8 percent.

19,550 freight trains operated on the lines of the CFR in March 1948, the total of train kilometers being 1,255,000. The period of journey of the railroad cars was 7.4 days. The dispatch of 5,860 cars on one day in August 1948 was the maximum performance reached so far. The total turnover for one month amounted to 181,664 loaded freight cars, including 10,836 for export and 170,828 for the domestic economy. The average daily performance for 1948 was 5,200 loaded freight cars. The plan for 1949 fixed the average daily performance at 5,800 loaded cars. Although an alltime high was reached with an average of 7,826 loaded railroad cars in June 1949, the average performance for the first six months of 1949 (5,490 cars) was 310 cars short of the fixed target. [illegible]s successfully tested in passenger traffic, it is now tried in freight traffic operations to achieve better results by reducing the number of changes of locomotives required on long-distance lines. The trial run of "experimental freight train No 1" on 16 September 1949 on the

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Bucharest-Craiova-Turnu Severin-Timisoara line (in Turnu Severin the only change of locomotive was made) resulted in a period of journey four hours shorter with a load of 1,000 to 1,650 tons (12 percent above standard). It may be expected that this procedure will be continued on a broad basis.

c. passenger traffic shows the same rising tendency. The annual performance, from 23 August 1947 to 22 August 1948, amounted to 356,666 trains, that is an increase of 18 percent over the previous year. The number of train kilometers run increased by 25 percent.

7. Military vulnerability of the Rumanian Railway Net

The military vulnerability of the railway net for the Soviet transit shipments and for Rumanian inland operations is constituted by the following facts: The small number of border crossing stations, (except in the west along the Hungarian border); The numerous man-made structures in the mountainous part of the country; the sparseness of the railroad net in the south (Wallachia) and east (Moldavia) of the country; the vulnerability of the few large railroad junctions.

a. Border crossings: There are only five crossings into the Soviet Union of which only two seem to be in operation. Three of these crossings can be eliminated by the destruction of the bridges across the Pruth River which forms the border between Rumania and the Soviet Union. The fourth crossing near Dornesti, on the line from Galicia, can be attacked with considerable effect in Galicia. The fifth crossing from Carpatho-Ukraine (Szigetkamara) is of no importance because its feeder lines are of very limited performance since they run through mountainous terrain.

There are only two connections with Bulgaria, one of which (the railroad ferry between Giurgiu and Ruse) can easily be closed by the destruction of the ferry or the mining of the Danube River. The other line in the vicinity of the Black Sea coast can be interrupted with long lasting effect by the bombing of the bridge system between Fetesti and Cernavoda or by the employment of partisans against these bridges.

The connections into Yugoslavia, existing only in the area of Timisoara, can be effectively interrupted by the elimination of this junction since rerouting possibilities are not available. The railroad connections into Hungary are difficult to interrupt because of the great number of crossings and the density of the railroad net in western Rumania. However, by aerial attacks on the Timisoara, Arad, Oradea and Satu Mare railroad junctions, transit traffic could be considerably disturbed although not entirely disrupted. Better possibilities of interrupting this traffic are given in Hungary on the Danube River.

b. Bridges: The numerous bridges in mountainous Transylvania are priority targets for the enemy airforce or partisans. The difficulties in rebuilding these bridges and the lack of rerouting possibilities would lead to long-lasting interruptions of the railroad traffic on these lines.

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c. Spareseness of the railroad net: The interruption of the relatively few railroad lines in southern and eastern Rumania would be very effective since there are only few rerouting possibilities.

d. Vulnerability of railroad junctions: Continuous bombing of the few important railroad junctions would have a devastating effect on railroad operations since there are few rerouting possibilities. Bucharest, Ploesti, Brasov, Craiova, Timisoara, and Cluj would probably be the most important targets.

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